TRAINING PROGRAM OF INSTRUCTION (TPI)

FOR

DINFOS-DMC

DIGITAL MULTIMEDIA COURSE

Approved by:

KECK.GARY.
LEE.1075256589

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Commandant Defense Information School
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DIGITAL MULTIMEDIA COURSE

TRAINING PROGRAM OF INSTRUCTION

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TRAINING PROGRAM OF INSTRUCTION

Preface

TRAINING PROGRAM OF INSTRUCTION FILE NUMBER (TPFN): DINFOS-DMC

TITLE: Digital Multimedia Course

TRAINING LOCATION: Defense Information School, Fort George G. Meade, Maryland

SPECIALTY AWARDED: USN: NEC 8193, Electronic Imaging Specialist

PURPOSE: To train selected officer/enlisted personnel and civilian employees of the Department of Defense in the principles, techniques, and skills required to produce digital multimedia products.

COURSE DESCRIPTION: The Digital Multimedia Course (DMC) provides intermediate level training in the knowledge and skills needed to create and integrate text, graphics, sound, animation and full-motion video into multimedia and web-based packages. The course includes instruction in the operation of computer systems, input devices and output devices to acquire, edit, design, manage, output, and archive digital imaging, graphic design and multimedia files. Students use software to create, manage and render the following: composite photographic layouts, graphic designs, page layouts, video productions, web pages and interactive multimedia solutions. The Digital Multimedia Course also includes theoretical and working instruction of computer fundamentals and functions, communications, color theory, and the principles and implementation of color management. DOD policies and instructions relative to image ethics and use of computer generated and edited images are emphasized.

PREREQUISITES: This course is open to DOD military and civilian personnel currently involved in daily operations in the Visual Information (VI) and Public Affairs (PA) career fields. VI personnel who have not attended their respective training; the Basic Still Photographer's Course (BSP) since Oct. 2002, the Basic Multimedia Illustrator's Course (BMIC, BGR) since Oct. 1999, the Electronic Imaging Course (EIC) since Oct. 1995, the Basic Lithographer's Course (BLC) since Nov. 2004 or the Basic Mass Communications Specialist Course (BMCSC-USN) since Nov. 2006 should submit a waiver request demonstrating sufficient knowledge to be successful in the Digital Multimedia Course (DMC), or qualified civilian (see individual service requirements). Sufficient knowledge is defined as two years of computer experience including operational skills in at least two of the following types of software: image editing, illustration, web design, authoring, non-linear video editing, or page layout.

Service	Officer	Civilian	Enlisted
USA:		Civilians GS-07-11 (Series 1001, 1020, 1035, 1060, 1071, 1084)	E-4 through E-7 (PA - 46Q/46Z; VI - 25M, 25V, 25Z)
USAF:		Civilians GS-07 through GS-11 (10XX Series)	E-4 through E-6 (3N0xx)
USN	Officers - O-1 - O-3 VI: 647X or 165X	Civilians GS-5 - GS-11 (Series 1082, 1084, 1060, 1001, 1071, 1035, 1020)	E-3 through E-6 MC or HM (8472)
	Note: USN: If waiver required, must include documented OJT, command endorsement and approval from senior regional mass communication specialist.		
USMC		Civilians GS-9 through 11 (PA Series 1035, VI Series 1001, 1081)	E-4 through E-9 (PA); E-3 through E-7 (VI)
USCG		Civilians (if approved by Service Chief)	E-4 through E-7
NGA	Officer O-1 - O-4	Civilians: as determined by agency	E-4 through E-9

International: Students English Comprehension Level (ECL) of 80; suggest individual have at least one year of experience in computer operations to include the following: computer setup, mouse control, use of peripheral devices, file system navigation, file management, and basic file creation. Must be in a career field/position with pay grades equivalent to Army E4, officer O-1, or civilian GS-5 or above. Must have distance visual acuity correctable to 20/20, and have normal color vision.

Interagency: Student's pay-grade, duty position description, and selection in accordance with specific agency guidance, policy and procedures.

(NGA is National Geospatial-Intelligence Agency (formally NIMA))

SECURITY CLEARANCE: Be eligible for SECRET clearance (USN, USMC)

CLASS SIZE:

MAXIMUM	24
MINIMUM	12
ANNUAL COURSE CAP	144

COURSE LENGTH:	33 Days
ACADEMIC HOURS:	255 hrs
ADMINISTRATIVE HOURS:	9 hrs
TOTAL COURSE HOURS:	264 hrs

INSTRUCTOR CONTACT HOURS: 730 hrs

TYPE/METHOD OF INSTRUCTION:

1	Lecture (L)		22 hrs
2	Performance Exercise (PE)		127 hrs
3	Demonstration (D)		66 hrs
4	Demonstration/Performance Exercise (D/PE)		7 hrs
5	Examination (E)		33 hrs
	Performance Examination (EP)	29 hrs	
	Written Examination (EW)	4 hrs	
6	Administrative Hours (AD)		9 hrs

TRAINING START DATE: October 2009

ENVIRONMENTAL IMPACT: None. DOD policy was followed to assess the environmental impact.

MANPOWER: The Interservice Training Review Organization (ITRO) formula was used to determine the number of instructors required.

EQUIPMENT AND FACILITIES: The Course Design Resource Estimate (CDRE) contains this information.

TRAINING DEVELOPMENT PROPONENT: Course Development Department, DINFOS Provost, Defense Information School, Fort George G. Meade, MD 20755.

OVERVIEW FUNCTIONAL AREA 1

DIGITAL IMAGE INPUT / OUTPUT

TOTAL FA HOURS: 35

Terminal Training Outcome: Students will discuss various types of CPUs, various hardware and computer operating systems as well as other computer devices. They will learn how to recognize common problems, various hardware and software troubleshooting techniques; and how to improve performance associated with electronic imaging workstations. Students review color theory and discuss color models as they relate to input and output and photographic processes for use on a monitor, multimedia, print output or for use on the World-Wide-Web. The limitations and advantages of various color models are discussed, providing students with the knowledge to correctly choose color models to match digital imaging and output processes. Students review digital camera systems and understand the functions of a digital camera including troubleshooting techniques. They will learn about various storage media used with a digital camera and various methods for downloading imagery to a computer and output devices. Students will apply their knowledge of camera operations and use digital imagery in various practical exercises. Students learn about color management throughout the digital imaging process, including color characterization and conversion of input and output devices, types of output devices, differences in operation and application in the military environment. Students apply knowledge of viewing environments, calibration equipment and software and color profiles and working spaces to images, input and output devices to maintain color integrity throughout the digital imaging process. Students also learn about desktop scanner technologies, including affects of resolution on output, dynamic range and color gamut, and apply the knowledge by producing optimum results from a scanned image. Students apply knowledge of DoD policy on ethical standards in electronic imaging process, as well as copyright and other legal issues. At the conclusion of the course, students will create an interactive DVD. A written examination will be administered at the end of Functional Area 2 to measure the student's comprehension of material presented in this functional area. A performance examination will be administered during this functional area. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

UNIT 001: Digital Input/Output

001 Identify and define safety precautions for working with electronic imaging systems
002 Identify hardware components on a multimedia workstation
003 Identify hardware system requirements for software
004 Define color theory and color models as related to digital imaging
005 Describe the characteristics and principles of digital cameras
006 Capture digital images
007 Identify the characteristics and principles of output devices
008 Identify procedures associated with the output of digital files

UNIT 002: Color Management

001 Define color calibration, characterization and conversion as it relates to digital imaging
002 Apply procedures associated with the color calibration, characterization, and conversion of input and output devices
003 Apply input/output principles

UNIT 003: Electronic Imagery Management

001 Edit, organize, and archive digital files

002 Explain Defense Imaging Management Operations Center (DIMOC) requirements and standards for image submission
003 Identify DOD policies, guidelines, and ethical standards required when using electronic imaging processes
004 Define Copyright and other legal issues affected by electronic imaging processes

FUNCTIONAL AREA 1
DIGITAL IMAGE INPUT / OUTPUT

TPFN: DINFOS-DMC-001-001-

UNIT TITLE: Digital Input/Output

TPFN HOURS AND TYPE: 7 L, 2 D, 7 PE

TPFN TOTAL HOURS: 16

PREREQUISITE TPFN: None

TASK(S):

001 Identify and define safety precautions for working with electronic imaging systems
002 Identify hardware components on a multimedia workstation
003 Identify hardware system requirements for software
004 Define color theory and color models as related to digital imaging.
005 Describe the characteristics and principles of digital cameras
006 Capture digital images
007 Identify the characteristics and principles of output devices
008 Identify procedures associated with the output of digital files

SUMMARY OF INSTRUCTION: Students are given a thorough review of safety precautions as they apply to electronic imaging systems. Students will discuss various types of CPUs, hardware and computer operating systems along with how different types of memory, buses, storage devices; and display monitors are configured for use on typical electronic imaging workstations. Discussion will also include hardware requirements for software support, and how graphics software integrates with system components, recognition of common problems, various hardware and software troubleshooting techniques and how to improve performance associated with electronic imaging workstations. Students are presented an overview of color theory and discuss color models as they relate to input and output and how color is created by input, output and photographic processes for use on a monitor, multimedia programs, and print output or for use on the web. Upon completion of this unit, students understand the functions of a digital camera, including camera controls and image management, flash controls, camera care and maintenance, troubleshooting problems with a digital camera, and advantages and limitations of various file formats associated with a digital camera. Students will be presented with information on various storage media used with a digital camera, the differences between a traditional and a digital camera, and various controls of both camera body and flash units. Students are provided further instruction into procedures for creating CD-ROM's/DVD's and at the conclusion of the course they will create a DVD. A written examination will be administered at the end of Functional Area 2 to measure the student's comprehension of material presented in this functional area. A performance examination will be administered during this functional area. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

REFERENCES:

- Applicable manufacturer's manuals
- Color Confidence by Tim Grey
- Digital Color Management by Giorgianni Madden
- Digital Media Tools by Nigel Chapman
- Digital Photo Review web site: http://www.dpreview.com
- Gretag MacBeth Eye-One Color Match Manual
- How Computers Work by Ron White
- Joint Task Force – Global Network Operation http://www.jtfgno.mil
- Mastering Digital Printing, 2nd Edition, Thompson
- Photography (9th Ed) by London & Upton
- Pocket Guide to Color with Digital Applications by Dr. Thomas Schildgen

- Real World Color Management by Bruce Fraser, Chris Murphy and Fred Bunting
- The Designer's Desktop Manual by Jason Sammons

INSTRUCTOR/STUDENT RATIO: 1:12 (L, EW); 1: 8 (D, PE, EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause repetitive strain injuries such as Carpal Tunnel Syndrome and / or eyestrain, and should practice proper posture to minimize risk of injury.

FUNCTIONAL AREA 1
DIGITAL IMAGE INPUT / OUTPUT

TPFN: DINFOS-DMC-001-002-

UNIT TITLE: Color Management

TPFN HOURS AND TYPE: 2 L, 7 PE, 2 EP

TPFN TOTAL HOURS: 11

PREREQUISITE TPFN: All previous

TASK(S):

001 Define color calibration, characterization and conversion as it relates to digital imaging
002 Apply procedures associated with the color calibration, characterization, and conversion of input and output devices
003 Apply input/output principles

SUMMARY OF INSTRUCTION: Students are presented with an overview of color management in the digital imaging process, including procedures associated with the calibration and characterization of computer monitors, scanners, digital cameras and output devices. Students will then apply these procedures using color management hardware and software. After being presented information on viewing environments, measuring devices and color profiles, students will use this knowledge by applying color management profiles and color working spaces to images, input and output devices to maintain color integrity from image acquisition to output. A performance examination will be administered during this functional area. A written examination will be administered at the end of Functional Area 2 to measure the student's comprehension of material presented in this functional area. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

REFERENCES:

- Applicable manufacturer's manuals
- Color Confidence by Tim Grey
- Digital Color Management by Giorgianni Madden
- GretagMcBeth Eye-One Color Match Manual
- Pocket Guide to Color with Digital Applications by Dr. Thomas Schildgen
- Real World Color Management by Bruce Fraser, Chris Murphy and Fred Bunting
- The Designer's Desktop Manual by Jason Sammons

INSTRUCTOR/STUDENT RATIO: 1:12 (L, EW); 1: 8 (D, PE, EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause repetitive strain injuries such as Carpal Tunnel Syndrome and / or eyestrain, and should practice proper posture to minimize risk of injury.

FUNCTIONAL AREA 1
DIGITAL IMAGE INPUT / OUTPUT

TPFN: DINFOS-DMC-001-003-

UNIT TITLE: Electronic Imagery Management

TPFN HOURS AND TYPE: 3 L, 1D, 4PE

TPFN TOTAL HOURS: 8

PREREQUISITE TPFN: All previous

TASK(S):

001 Edit, organize, and archive digital files
002 Explain Defense Imaging Management Operations Center (DIMOC) requirements and standards for image submission
003 Identify DOD policies, guidelines, and ethical standards required when using electronic imaging processes
004 Define Copyright and other legal issues affected by electronic imaging processes

SUMMARY OF INSTRUCTION: Students will apply color management in the digital imaging process, including procedures associated with the calibration and characterization of computer monitors, scanners, digital cameras and output devices, using color management hardware and software. Students will apply color management profiles and color working spaces to images, input and output devices to maintain color integrity from image acquisition to output. Students will apply principles, characteristics and procedures associated with archiving computer based files associated with: defining the purposes for archiving, identifying items to be archived, understanding the processes involved in building a catalog, identifying the components of a well written caption, standards for submitting imagery to the Defense Imagery Management Operations Center, proper procedures for creating a VIRIN, how to use the IPTC header data, and methods associated with transferring files. Information presented in this unit is critical to the effectiveness and trustworthiness of DOD Imagery released through both internal and external communications channels. At the conclusion of the unit, students will be able to differentiate between image enhancement and image manipulation, how each is defined and regulated by current DOD policies and the negative effects of violating policy. Students identify types of editing, the ethics associated with digital editing and acceptable and prohibited practices in image editing. They learn copyright and various legal issues pertaining to digital imaging processes and emerging technology. A performance examination will be administered during this functional area. A written examination will be administered at the end of Functional Area 2 to measure the student's comprehension of material presented in this functional area. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

REFERENCES:

- Adobe Photoshop Classroom in a Book by Adobe Creative Team
- Adobe Photoshop Revealed by Elizabeth Eisner Reding
- Copyright Website www.copyright.gov
- Defense Imagery Management Operations Center (DIMOC) web site: www.defenseimagery.mil
- Digital Color Management by Giorgianni Madden
- DOD Instruction 5040.05, Alteration of Official DOD Imagery

INSTRUCTOR/STUDENT RATIO: 1:12 (L, EW); 1:8 (PE, EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause repetitive strain injuries such as Carpal Tunnel Syndrome and / or eyestrain, and should practice proper posture to minimize risk of injury.

OVERVIEW FUNCTIONAL AREA 2

DIGITAL GRAPHIC DESIGN

TOTAL FA HOURS: 99

Terminal Training Outcome: Students will use prerequisite knowledge of various vector, raster and desktop publishing software, building on basic procedures associated with the following: creating and selecting paths, coloring paths, transforming elements, creating text, using layers, creating groups of elements, applying blends between paths, creating technical drawings, creating three dimensional objects using perspective and the principles of IPT, applying depth to an illustration, and how to use established composition rules in applying graphic design principles to create a vector illustration. Upon completion of the raster based graphic design unit, students will be able to accomplish the following: describe the different applications of image enhancement software, including the role of a pixel in a digital image and how channels affect the color of a displayed pixel. They will use various methods for selecting, moving, transforming, and painting pixels, apply text to an image, discuss and use various compression formats for saving image files, use layers and their associated constructs to create composite images, use masks to create stored alpha channels, use actions and batch processing to automate image enhancement procedures, and apply basic and advanced color correction methods using various color models, adjustment tools and channels. Students apply raster based graphic design principles in a final raster project. Students apply knowledge and skills in all three units in creating photo story and multiple page documents using advanced digital page layout and graphic design techniques using desktop publishing software. A performance examination will be given at the end of each unit. A written examination will be administered at the end of this functional area to measure the student's comprehension of material presented in this and previous functional areas. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

UNIT 001: **Vector-Based Graphic Design**

001 Create vector-based images
002 Create technical illustrations using advanced graphic design techniques
003 Apply graphic design techniques to create illusion of depth
004 Apply graphic design principles

UNIT 002: **Raster-Based Graphic Design**

001 Describe functions and operations of image enhancement software
002 Use various compression formats
003 Demonstrate layer workflow management
004 Use advanced color correction techniques
005 Apply raster based imaging principles

UNIT 003: **Digital Page Layout**

001 Create a photo story layout using page layout software
002 Create a multi-page document using advanced layout and design techniques
003 Apply page layout principles
004 Mid-course examination and critique

FUNCTIONAL AREA 2
DIGITAL GRAPHIC DESIGN

TPFN: DINFOS-DMC-002-001-

UNIT TITLE: Vector-Based Graphic Design

TPFN HOURS AND TYPE: 1 L, 11 D, 18 PE, 2 EP

TPFN TOTAL HOURS: 32

PREREQUISITE TPFN: All previous

TASK(S):

001 Create vector-based images
002 Create technical illustrations using advanced graphic design techniques
003 Apply graphic design techniques to create illusion of depth
004 Apply graphic design principles

SUMMARY OF INSTRUCTION: Students are given an overview of graphic design software and techniques used to create graphics to be used independently or as an enhancement to a digital image. Students will discuss and use procedures associated with the following: creating and selecting paths, coloring paths, transforming elements, creating text, using layers, creating groups of elements, applying blends between paths, creating technical drawings, creating three dimensional objects using perspective and the principles of IPT, applying depth to an illustration, and how to use established composition rules. A performance examination will be given at the end of this unit. A written examination will be administered at the end of this functional area. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

REFERENCES:

- Adobe Illustrator Classroom in a Book by the Adobe Creative Team
- Adobe Illustrator Revealed by Chris Botello
- Applicable manufacturers' manuals
- Digital Media Tools by Nigel Chapman and Jenny Chapman
- The Desktop Designer's Manual by Jason Simmons

INSTRUCTOR/STUDENT RATIO: 1:12 (L, EW); 1: 8 (D, PE, EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause repetitive strain injuries such as Carpal Tunnel Syndrome and / or eyestrain, and should practice proper posture to minimize risk of injury.

FUNCTIONAL AREA 2
DIGITAL GRAPHIC DESIGN

TPFN: DINFOS-DMC-002-002-

UNIT TITLE: Raster-Based Graphic Design

TPFN HOURS AND TYPE: 1 L, 14 D, 21 PE, 2 EP

TPFN TOTAL HOURS: 38

PREREQUISITE TPFN: All previous

TASK(S):

001 Describe functions and operations of image enhancement software
002 Use various compression formats
003 Demonstrate layer workflow management
004 Use advanced color correction techniques
005 Apply raster based imaging principles

SUMMARY OF INSTRUCTION: Students are presented an overview of the functions and operations of image enhancement software and the applications of this type of software, especially in the military imaging environment. Upon completion of this unit, students will be able to accomplish the following: describe the two primary tasks of image enhancement software, including the role of a pixel in a digital image and how channels affect the color of a displayed pixel. They will use various methods for selecting, moving, transforming, and painting pixels, apply text to an image, discuss and use various compression formats for saving image files, use layers and their associated constructs to create composite images, use masks to create stored alpha channels, use actions and batch processing to automate image enhancement procedures, and apply basic and advanced color correction methods using various color models, adjustment tools and channels. A performance examination will be given at the end of this unit. A written examination will be administered at the end of this functional area. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

REFERENCES:

- Adobe Photoshop Classroom in a Book by Adobe Creative Team
- Adobe Photoshop Revealed by Elizabeth Eisner Reding
- Applicable manufacturers' manuals
- Digital Media Tools by Nigel Chapman and Jenny Chapman
- The Desktop Designer's Manual by Jason Simmons

INSTRUCTOR/STUDENT RATIO: 1:12 (L, EW); 1: 8 (D, PE, EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause repetitive strain injuries such as Carpal Tunnel Syndrome and / or eyestrain, and should practice proper posture to minimize risk of injury.

FUNCTIONAL AREA 2
DIGITAL GRAPHIC DESIGN

TPFN: DINFOS-DMC-002-003-

UNIT TITLE: Digital Page Layout

TPFN HOURS AND TYPE: 1 L, 9 D, 15 PE, 2 EW, 2 EP

TPFN TOTAL HOURS: 29

PREREQUISITE TPFN: All previous

TASK(S):

001 Create a photo story layout using page layout software
002 Create a multi-page document using advanced layout and design techniques
003 Apply page layout principles
004 Mid-course examination and critique

SUMMARY OF INSTRUCTION: Students are presented with an overview of digital page layout software. Classroom discussion consists of the following: identifying and using various types of page elements, understanding the uses of and methods for creating master pages, methods for defining styles, applying compositional rules to layout elements, applying colors to various page elements, techniques used to create table of contents and indexes, methods for combining multiple documents together, and techniques to create a PDF. Students apply knowledge and skills in creating photo story and multiple page documents using advanced layout and design techniques. A performance examination will be given at the end of this unit. A written examination will be administered at the end of this functional area. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

REFERENCES:

- Adobe In Design Classroom in a Book by Adobe Creative Team
- Adobe In Design Revealed by Chris Botello
- Applicable manufacturers' manuals
- Designer Toolkit by Graham Davis
- Digital Media Tools by Nigel Chapman and Jenny Chapman
- The Desktop Designer's Manual by Jason Simmons

INSTRUCTOR/STUDENT RATIO: 1:12 (L, EW); 1: 8 (D, PE, EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause repetitive strain injuries such as Carpal Tunnel Syndrome and / or eyestrain, and should practice proper posture to minimize risk of injury.

OVERVIEW FUNCTIONAL AREA 3

INTERACTIVE MULTIMEDIA

TOTAL FA HOURS: 108

Terminal Training Outcome: Students will use prerequisite knowledge of various interactive multimedia software applications as they are presented with additional skills and concepts of interactive multimedia, including video editing concepts and guidelines and using video editing software. Students discuss various terms associated with video editing, methods for importing clips into a video editing application, various procedures for editing audio and video clips, procedures for creating titles, and various file formats and software for exporting edited movies. Students will create an interactive production by applying authoring terminology, principles of animation, the stages of multimedia authoring, types of authoring software and components of a timeline, procedures for creating animation, concepts and functions of a cast, how to create navigation, and methods for publishing a completed work. Students will use communication terms, protocols, computer communications connectivity and various methods to send and receive computer-based files and understand the concepts behind point to point connections, various communication methods such as SFTP, FFT, and the use of e-mail and the Internet as transferring systems, as well as security concerns related to the transmission of files over unsecured networks. Students learn the concepts of the Web and the technologies the Internet employs, policies and regulations governing the Web, including compliance with Section 508 standards. Students use storyboards to illustrate the importance of file management in the creation and management of a web site. Students apply web page design tips and essentials in creating a web site, as well as various methods of publishing a web site to a web server. A performance examination will be given at the end of each unit. A written examination will be administered at the end of this functional area to measure the student's comprehension of material presented in this functional area. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

UNIT 001: Digital Video Editing

001 Edit digital video
002 Apply digital video principles

UNIT 002: Interactive Multimedia Techniques

001 Create an interactive production using multimedia techniques
002 Apply multimedia principles

UNIT 003: Communications

001 Transmit files
002 Identify Section 508 standards
003 Identify and define the characteristics of a web page and web site design, file and media management, and image optimization
004 Describe the use of a network file server in accordance with established procedures, using a computer work station
005 Create and maintain a web site
006 Apply web site design principles
007 Final examination and critique

FUNCTIONAL AREA 3
Interactive Multimedia

TPFN: DINFOS-DMC-003-001-

UNIT TITLE: Digital Video Editing

TPFN HOURS AND TYPE: 1 L, 9 D, 16 PE, 2 EP

TPFN TOTAL HOURS: 28

PREREQUISITE TPFN: All previous

TASK(S):

001 Edit digital video
002 Apply digital video principles

SUMMARY OF INSTRUCTION: Students are presented with an overview of video editing concepts and guidelines and using video editing software. They discuss various terms associated with video editing, differences between linear and non-linear video editing, methods for importing clips into a video editing application, various procedures for editing audio and video clips, procedures for creating titles, and various file formats and software for exporting edited movies. Students apply these techniques in a performance examination at the end of this unit. A written examination will be administered at the end of this functional area to measure the student's comprehension of material. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

REFERENCES:

- Adobe Premiere Pro Classroom in a Book by Adobe Creative Team
- Applicable manufacturers' manuals
- Digital Media Tools by Nigel Chapman and Jenny Chapman
- The Desktop Designer's Manual by Jason Simmons

INSTRUCTOR/STUDENT RATIO: 1:12 (L, EW); 1: 8 (D, PE, EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause repetitive strain injuries such as Carpal Tunnel Syndrome and / or eyestrain, and should practice proper posture to minimize risk of injury.

FUNCTIONAL AREA 3
Interactive Multimedia

TPFN: DINFOS-DMC-003-002-

UNIT TITLE: Interactive Multimedia

TPFN HOURS AND TYPE: 2 L, 10 D, 20 PE, 2 EP

TPFN TOTAL HOURS: 34

PREREQUISITE TPFN: All previous

TASK(S):

001 Create an interactive production using multimedia techniques
002 Apply multimedia principles

SUMMARY OF INSTRUCTION: Students are given an overview of multimedia software. Classroom discussion includes authoring terminology, principles of animation, identifying the stages of multimedia authoring, types of authoring software and components of a timeline, procedures for creating animation, understanding the functions of a cast, explaining how to create navigation, and methods for publishing a completed work. Students apply these concepts to create an interactive production. A performance examination will be administered at the end of this unit. A written examination will be administered at the end of this functional area to measure the student's comprehension of material. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

REFERENCES:

- Adobe Flash Classroom in a Book by Adobe Creative Team
- Adobe Flash Revealed by James E. Shuman
- Applicable manufacturers' manuals
- Digital Media Tools by Nigel Chapman and Jenny Chapman
- The Desktop Designer's Manual by Jason Simmons

INSTRUCTOR/STUDENT RATIO: 1:12 (L, EW); 1: 8 (D, PE, EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause repetitive strain injuries such as Carpal Tunnel Syndrome and / or eyestrain, and should practice proper posture to minimize risk of injury.

FUNCTIONAL AREA 3
Interactive Multimedia

TPFN: DINFOS-DMC-003-003-

UNIT TITLE: Web Site Design

TPFN HOURS AND TYPE: 4 L, 10 D, 26 PE, 2 EW, 4 EP

TPFN TOTAL HOURS: 46

PREREQUISITE TPFN: All previous

TASK(S):

001	Transmit files
002	Identify Section 508 standards
003	Identify and define the characteristics of a web page and web site design, file and media management, and image optimization
004	Describe the use of a network file server in accordance with established procedures, using a computer work station
005	Create and maintain a web site
006	Apply web site design principles
007	Final examination and critique

SUMMARY OF INSTRUCTION: Students discuss communication terms, protocols, computer communications connectivity and various methods to send and receive computer-based files. They also discuss the concepts behind point to point connections, various communication methods such as SFTP, FFT, and the use of e-mail and the Internet as transferring systems, and security concerns related to the transmission of files over unsecured networks. Students are presented an overview of the Web, its history and terms, and technologies the Internet employs, and policies and regulations governing the Web, including compliance with Section 508 standards. Students discuss and use storyboards to illustrate the importance of file management in the creation and management of a web site. Discussion will also include the various file types supported by web browsers; how HTML works and about basic HTML tags. Each student will use software to learn how to perform each of the following: design and create a web site and pages containing various types of links, format pages using tables, frames and draw layers, control design of a site using templates and style sheets, enhance and optimize a site using different types of graphic and multimedia files, and create a basic form page. Students apply web page design tips and essentials in creating a web site, as well as various methods of publishing a web site to a web server in a performance examination at the end of this unit. A written examination will be administered at the end of this functional area to measure the student's comprehension of material presented. A minimum score of 70% on all examinations are required before the student may progress to the next functional area.

REFERENCES:

- Adobe Dreamweaver Classroom in a Book by Adobe Creative Team
- Adobe Dreamweaver Revealed by Sherry Bishop
- Defense Imagery Management Operations Center (DIMOC) web site: www.defenseimagery.mil
- Digital Media Tools by Nigel Chapman and Jenny Chapman
- How Computers Work by Ron White
- Internet: The Complete Reference, Osborne/McGraw Hill
- Section 508 Standards, Law 508, website http://www.section508/
- The Desktop Designer's Manual by Jason Simmons
- W3C Web Content Accessibility Guidelines 1.0 website http://www.w3.org/TR/WAI-WEBCONTENT/

FUNCTIONAL AREA 4

PERFORMANCE TEST

TPFN: DINFOS-DMC-004-001-

UNIT TITLE: Final Project

TPFN HOURS AND TYPE: 13EP

TPFN TOTAL HOURS: 13

PREREQUISITE TPFN: All previous

TASK(S):

001 Final exam

SUMMARY OF INSTRUCTION: Students are divided into four teams. Each team will be responsible for one of the following: Create a web site, create a poster, create an interactive multimedia production, or create a DVD cover. These tasks will involve the use of software including image editing, graphic design, page layout, video editing, multimedia authoring, archiving, and other techniques presented throughout the course of instruction. A minimum composite grade of 70% is required on the project. A minimum passing score of 70% is required on all examinations before the student may progress to further functional areas.

REFERENCES:

- All previous functional area references.

INSTRUCTOR/STUDENT RATIO: 1:8 (EP)

SAFETY FACTORS: Students are reminded that prolonged computer use may cause repetitive strain injuries such as Carpal Tunnel Syndrome and / or eyestrain, and should practice proper posture to minimize risk of injury.

FUNCTIONAL AREA 5

ADMINISTRATION

TPFN: DINFOS-DMC-010-001-

UNIT TITLE: Administration

TPFN HOURS AND TYPE: 9 AD

TPFN TOTAL HOURS: 9

PREREQUISITE TPFN: N/A

TASK(S):

001 In-processing/Orientation
002 Course Survey
003 Out processing
004 Graduation

SUMMARY OF INSTRUCTION: Self-explanatory.

REFERENCES:

- DINFOS Policy and Operational Procedures Manual

INSTRUCTOR/STUDENT RATIO: 1:24 (AD)

SAFETY FACTORS: Routine